

Remarks

Claims 1-20 were pending in the present application. Claims 15 and 16 have been cancelled because of the Examiner's restriction requirement. Claims 5 and 18-19 have also been cancelled. New claims 21-23 have been added. Thus, claims 1-5, 7-14, 17, and 20-23 are now pending.

The Examiner has rejected claims 1-20 under 35 USC § 112; 1 as not being enabled because "the recitation of a terpene and a nonionic surfactant are critical or essential to the practice of the invention, but not included in the claim(s)," and cites *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). This is an improper assertion of *Mayhew*. The examiner is correct to the extent that a terpene and nonionic surfactant comprise the agent in the preferred embodiment disclosed. There is, however, no statement in the application that the inclusion of particular solvents or surfactant's are critical or essential, however. With respect to the terpene component, the examiner's enablement rejections have been mooted by the adding a limitation to the claims that the solvent is organic. Though the solvent of the preferred embodiment is a terpene, there is nothing in the specification that suggests that the surfactant must be a terpene. Other kinds of organic solvents, in fact, almost any organic solvent could be used in the process of the present invention, though some would likely be excluded for safety and health reasons. Nowhere does the specification suggest that the process would be inoperable if the solvent chosen is not a terpene. The specification instead suggests that organic solvents will work. See ¶ 22. There is, thus, no evidence, in the specification or otherwise, that the process requires the solvent to be a terpene in order to be operable.

Exception is also taken to the examiner's suggestion that enablement requires limitation that the surfactant be nonionic. Though the surfactant of the preferred embodiment is

nonionic, there is nothing in the specification that suggests that the surfactant must be nonionic. Other kinds of surfactants, e.g., cationic, anionic, as well as other additives would work also. There is nothing in the specification which suggests that the process would be inoperable if the surfactant is other than nonionic. The specification instead suggests that other additives known to those skilled in the art would work also. See last sentence of ¶ 26. There is, thus, no evidence, in the specification or otherwise, that the process requires a nonionic surfactant to be operable.

Where the absence of a claimed element does not make the process inoperable, the application of *Mayhew* is improper. See e.g., *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1337-38; 65 USPQ2d 1385 (Fed. Cir. 2003). Therefore, the applicants should not be improperly restricted to terpene solvents or nonionic surfactants.

Even though the specification here discloses an enabling species for the solvent (e.g., terpene) and the surfactant (e.g., a nonionic surfactant), which would normally provide enablement for the genus in which it is included (e.g., all organic solvents and surfactants), the examiner suggests that one skilled in the art would be subjected to undue experimentation to determine which chemicals would work. With respect to organic solvents, the selection of an appropriate solvent would not involve significant experimentation. Rather, almost any organic solvent would work. The selection of a particular surfactant could also be accomplished without undue experimentation. Rather, one skilled in the art could easily make this determination. After review of the desired characteristics disclosed in the specification – that the surfactant enhance detergency, oil solubility, wetting, and rinsing (See ¶ 26), the artisan could simply select the additives that meet these characteristics. This information is readily available in published charts, textbooks, and published articles. These references would enable an artisan to readily

select an appropriate additive/surfactant. Thus, Applicant requests that the examiner's enablement rejections be withdrawn.

Claims 1-14 and 17-20 stand rejected under 35 USC § 112; ¶ 2. The Examiner first takes offense to the terms "vaporous effluent" appearing in claim 1. In the Office Action the Examiner inquires whether effluent includes contaminants "in the device or steam." Claim amendments have been made that are believed to overcome these rejections.

The Examiner also suggests that it is unclear what is meant in the claim 1, 17 and 20 limitations of "activating the device." The use of this term is consistent with its plain meaning. As used here, the term is meant to suggest that the device is "set in motion." See Webster's II Riverside Dictionary, p. 76. Most commonly this will be done by temporarily turning on the device (e.g., pump) by flipping a switch or pressing a button. Other methods of activation might also be employed.

The Examiner also suggests that claim 14 is indefinite because "it is unclear what is the minimum temperature." Applicant is unable to understand the substance of this rejection because neither claim 14, nor any of the other claims include a minimal-temperature limitation. Thus, it is hoped that this rejection might also be withdrawn or clarified further.

With respect to the Examiner's art-based rejections, claims 1, 2, 5-7, 9, 11, and 17-21 stand rejected under § 102 (b) as being anticipated by U.S. Patent No. 5,356,482 issued to Mehta et al. Claims 8, 10, and 13 stand rejected under § 103 (a) as being obvious in view of Mehta.

These rejections should be withdrawn in view of differences between the claimed invention and the reference.

Mehta uses terpenes for removing toxic or explosive gases from refinery vessels so that they may be safely entered by workers. See Col. 3, lines 55-68. It is a detoxification process using a steam-delivered agent. The detoxification agent of Mehta is made to be aqueous. See Table I, Col. 7. It is then introduced to the interior surfaces of the vessel by condensing it. See Col. 4, lines 13-19. During Before, during, and after condensation the Mehta vessel is sealed and subject to at extreme pressures. The vessel is subsequently cooled. The cooling causes the Mehta water-based formulation to condense, trapping primarily only toxic and explosive gases from the contamination lining the inside surfaces of the device. These toxins are then removed by liquid circulation. The purpose of Mehta is to remove only the toxic vaporous components from the contaminants on the inside of the vessel. The solid components are not targeted. Once this process has detoxed the vessel, workers are able to enter it for manual cleaning of the solid contaminants, or other maintenance. See Col. 3, lines 66-68; Col. 5, line 35 - Col. 6, line 69; Examples 1-5 starting in Col. 7.

Unlike the Mehta detoxification process, the process of the present invention is directed to cleaning the cleaning the solid, organic contaminants from the metal surfaces inside a dynamic device, such as an impeller pump. The workers in the refinery need not physically enter the device to perform any kind of manual cleaning (e.g., scraping, high pressure spraying). They instead are able to completely clean the vessel by vaporously accessing it from the outside. This is accomplished by vaporizing the contaminants, and then removed by venting them out of the device.

The present invention is also different from Mehta in that it is done at substantially atmospheric pressure. The ventilation of the device during steam delivery allows the pressures to remain at safe levels. And pressurization is completely unnecessary. The

objective is not to trap the formulation and condense it like in Mehta. The objective is to make a once-through pass of the vaporous cleaner through the device, vaporize contaminants, and then remove these vaporized contaminants.

Another difference is in the nonaqueous formulation used. The steam-injected cleaner of the present invention includes only an organic solvent and a surfactant. It is not water-based like Mehta's. The inclusion of water to Applicant's formulation would defeat its cleaning objectives. This is because the present invention uses a true vapor-phase cleaning process unlike the pressurized condensation process of Mehta. There is no need for water to prompt condensation. The presence of water would instead interfere with the Applicant's vaporization process. The method of the present invention works best when the formulation is fully concentrated.

Furthermore, there is no mention in Mehta of activating the device while it is being cleaned. The examiner contends that the Mehta shows this because it discloses circulation of fluids through a vessel. This does not meet the claimed invention, which is a process for cleaning a dynamic device, e.g. a pump, which has been set in motion during the cleaning process. The distillation column referred to by the examiner as being activated – a distillation column – is not a dynamic device at all. Therefore, it is not even capable of being actuated.

The above noted differences appear in the claims and have not been found in the prior art. The examiner has failed to show, among other things, the claimed limitations of: (i) a process that involves removing vaporized contaminants from a dynamic device while an organic solvent and a surfactant are being steam delivered, and (ii) activating the dynamic device during this administration.

The examiner's initial rejections failed to provide any objective evidence regarding any of these, and other claimed differences. An examiner is required to provide objective evidence in support of findings. It is fundamental that rejections be based on evidence in the record. *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983). To support such a rejection, the examiner must reveal evidence in the references showing the teachings relied on. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). This factual inquiry must be thorough, and may not be based on mere unsupported statements or conclusions. *See Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000); *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998); *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); and *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998). The showing must also be specific. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (the USPTO must identify specifically the principle, known to one of ordinary skill, that suggests the claimed invention). The examiner has failed to produce any objective evidence in support of the limitations claimed. Therefore, we request that all of the examiner's Mehta-based § 102 (b) and § 103 (a) rejections be withdrawn.

Finally, the Examiner has provisionally rejected claims 1-12 under the judicially-created doctrine of obviousness-type double patenting citing claims 1-10 and 14-15 of Applicant's commonly-owned U.S. Application Pub. No. 2004/0102351A1 (Application Serial

No. 10/304,370) as well as being unpatentable over claims 1 and 4-11 of copending U.S. Application Serial No. 10/447,441. These rejections, it is believed, have been overcome by the filing of an appropriate terminal disclaimer, attached.

The application is believed to be in condition for allowance. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned by telephone prior to issuing a subsequent action.

Respectfully submitted,



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